

AMENDMENTS TO THE SPECIFICATION

Page 1, first paragraph (standard paragraph [0002] of US Published US Published Application 2007/0137105), please substitute the following CAPTIONS and paragraph:

TECHNICAL FIELD

[0001] This ~~invention~~ disclosure relates to the treatment of waste materials and, in particular, to both method and apparatus for assisting transformation of such materials, where this process is often referred to as composting.

Page 1, paragraphs 2 and 3 (standard paragraphs [0002] and [0003] of US Published Application 2007/0137105), please substitute the following paragraphs:

[0002] There is a ~~serious worldwide~~ problem associated with the storage and disposal of waste materials, especially those that are by their nature potentially odiferous during their breakdown.

[0003] ~~I have~~ It has been discovered that if such materials are held and treated in a different way than has hitherto been the case, then there can be significantly improved reduction in unpleasant odour, and further there can be, in the same process, a reduction in the number of pathogens that may, in the first instance, exist in the materials.

Page 1, paragraph 5 (standard paragraph [0005] of US Published Application 2007/0137105), please substitute the following paragraph:

[0005] While this has been previously considered ~~previously~~ to promote odiferous byproducts, it has been found that if air and gaseous products from the composting process itself are caused, from time to time, to be blown through the composting material, ~~and~~ especially if this is passed through a biological filter, then the level of noxious odours that are released when any chamber within which the composting effect is being nurtured is opened, that these odours are very much less objectionable than has been expectations in previous systems.

Beginning on page 1, paragraphs 6 and 7 (standard paragraphs [0006] and [0007] of US Published Application 2007/0137105), please substitute the following paragraphs:

[0006] One of the problems that arises with such a system, however, is that during the breakdown process, some materials lose water, which then seeps to a bottom of any chamber.

[0007] In order to effect a distribution of the atmosphere through the composting material, there has been a distribution arrangement so that the atmosphere being recirculated will be distributed to some extent ~~uniformly~~ uniformly throughout the area.

Page 2, lines 10-20 (standard paragraphs [0010] and [0011] of US Published Application 2007/0137105), please substitute the following paragraphs:

[0010] The discovery has been that by having ~~this~~ these recirculation gases passing through liquid prior to being released into the composting material has resulted in a return to at least a modest extent of some noxious ~~odours~~ odors that previously were not experienced.

[0011] It has still not been established precisely why there should be such an increase in odour although one theory suggests that some of the useful gas such as perhaps a higher than usual ammonia, or even a useful bacterium spore is being selectively separated by solution into the water and is therefore either reducing the effectiveness of the gas or the recirculation technique or is carrying further of the gases resulting from some decomposition within the water or other liquid itself.

[0011a] Other objects and advantages of the present invention will become apparent from the following description, taken in connection with the accompanying drawings, wherein, by way of illustration and example, an embodiment of the present invention is disclosed.

Page 2, line 21 (before standard paragraph [0012] of US Published US Published Application 2007/0137105), please substitute the following CAPTION:

SUMMARY OF THE INVENTION ~~BRIEF DISCLOSURE OF THE INVENTION~~

Page 2, lines 22-27 (standard paragraph [0012] of US Published Application 2007/0137105), please substitute the following paragraphs:

[0012] ~~In one form of this invention, although it need not necessary be the only or indeed the broadest form of this, there is proposed therefore a method of treating composting materials substantially as described where, however, aqueous liquids are arranged to be held at a level which is lower than any one or more of the gaseous outlets effecting gaseous distribution below the composting materials.~~ One aspect of the present disclosure includes an apparatus for the composting of material comprising a container with an openable lid which closes with respect to its

surrounding perimeter by means of a resilient seal so as to provide a substantially airtight closure with the container, across the bottom of the container being a series of supply conduits which have a plurality of holes passing through the walls thereof which are connected to a return conduit which is further connected to a pump and a filter and further connected to an extraction conduit, whereby when the pump operates air is drawn from the upper regions of the container into the extraction conduit and forced out of the supply conduits to flow through the material being composted, wherein the aqueous liquids formed during treatment are held at a level lower than that of the supply conduits, by a combination of a sump below the supply conduits and floor means to hold the material being treated above the sump, the floor means having one or more apertures disposed thereon, to allow liquid to pass therethrough and into the sump, wherein the apparatus further comprises a pump means to pump the liquid from the sump area and to disperse the liquid over the top of the material to be composted.

[0012a] Another aspect of the present disclosure includes a method of treating materials to be composted comprising the steps of containing such materials within the closed container as described above, then effecting a first covering of woodchips then successively a layer of organic material to be composted and a layer of absorbing woodchips; pumping air into the container at one part of the contained body of material, and taking the air having passed through the material from the container so that it, and it only, will be substantially recirculated back to an introduction location of the material so that gaseous products of any decomposition of the materials will be kept within the container or its connected conduits, the liquid formed as a result of the composting passing through the floor means and held at a level lower than that of the supply conduits; and extracting the collected liquid from the lower most level and reintroducing it into the top of the container.

Page 3, after line 4 (after standard paragraph [0014] of US Published Application 2007/0137105), please add the following paragraph:

[0014a] In preference, the floor is caused to be sloping when the chamber is positioned on a horizontal floor or support such as the ground and there is a slot at one end which is the lower end of the floor such that the water will pass down the floor onto the slot and then into the sump underneath. More preferably, there are provided a number of chambers in connection with the lower end of the floor for isolation of the liquid material produced.

Page 1, last line through page 5, line 4 (standard paragraph [0014] of US Published Application 2007/0137105), please substitute the following paragraphs:

[0027] In another aspect of the present disclosure ~~In a further preferred arrangement in the alternative,~~ the liquid is transferred, from time to time, into a separate settlement chamber where it is held under conditions of isolation and further encouraged to nurture any bacteria to the effect that there is a biological cleansing of the material akin to treatments known to exist currently.

[0027a] In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawing. The invention is capable of embodiments in addition to those described and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein, as well as the abstract, are for the purpose of description and should not be regarded as limiting.

[0027b] The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate certain embodiments of the invention, and together with the description, serve to explain the principles of the invention.

Page 5, before the last two lines (before standard paragraph [0033] of US Published US Published Application 2007/0137105), please insert the following CAPTION:

BRIEF DESCRIPTION OF THE DRAWINGS

Page 5, last two lines (standard paragraph [0033] of US Published US Published Application 2007/0137105), please substitute the following paragraph:

[0033] For a better understanding of this invention ~~it will now be described~~ disclosure to an exemplary embodiment which shall be described herein with the assistance of the drawings wherein:

Page 6, lines 1-6 (standard paragraphs [0034] and [0035] of US Published Application 2007/0137105), please substitute the following paragraphs:

[0034] FIG. 1 is a schematic ~~arrangement~~ illustration of an apparatus outside the scope of the present invention as claimed, but illustrating showing a chamber containing composting materials, a supporting floor for the composting materials on which a network of conduits lie, and beneath this, a receiving sump for holding such liquid; ~~and~~.

[0035] FIG. 2 is a schematic illustration of an exemplary apparatus ~~an alternative arrangement~~ again shown in schematic arrangement in which there is a collection point at a bottom of the sump arranged to, from time to time, distribute liquid gathered back into a top of the chamber.

[0035a] FIG. 3 is a schematic illustration of an exemplary apparatus in which there is a collection point at a bottom of the sump arranged to, showing the floor having one or more apertures disposed thereon, to allow liquid to pass therethrough and into the sump.

Page 6, before line 7 (before standard paragraph [0036] of US Published US Published Application 2007/0137105), please insert the following CAPTION:

DETAILED DESCRIPTION

Page 6, lines 7-9 (standard paragraph [0036] of US Published Application 2007/0137105), please substitute the following paragraph:

[0036] Referring now to FIGs. 1 and 2, Figure 2 in particular being where an exemplary embodiment of an apparatus for handling compressible materials is illustrated. Specifically, FIGs. 1 and 2 both illustrate ~~Now referring to the drawings in detail, there is a~~ chamber 1 which comprises a bin made from walls 2, a top lid 3 which can be opened, from time to time, but otherwise when closed seals the bin from external atmosphere so that this is airtight, and a sump 4.

Page 6, line 13 through page 7, line 1 (standard paragraphs [0038] - [0041] of US Published Application 2007/0137105), please substitute the following paragraphs:

[0038] Immediately above the sump is a floor 6 which is arranged to be floating so that there is a higher side 7 and a lower side 8, the lower side 8 being separated from the side of a wall 2 by a gap 9 ~~from the side of a wall 2~~ so that as any rotting material 11 releases water, this seeps through onto the floor, and flows through the gap 9 and into the sump 4.

[0039] There is a network of supply conduits 10 with lowermost apertures shown generally at 110 which is supported above the floor 6, and which is connected to a recirculation arrangement so that the internally retained atmosphere will be recirculated, from time to time, in this case on an hour by hour basis, that is, one hour on and one hour off, ~~and the conduit network is supported above the floor 6.~~

[0039a] FIG. 3 is a schematic illustration of an exemplary apparatus in which there is a collection point at a bottom of the sump arranged to, showing the floor having one or more apertures 35 disposed thereon, including a plurality of apertures at the lowermost point 37, to allow liquid to pass therethrough and into the sump.

[0040] The air and other gaseous fluids (which includes over a period of time increased ammonia by reason of breakdown of nitrogen containing materials) are extracted from a top of the chamber 1 through extraction conduit 12 through a pump (in the form of a blower 13 in this case) which in turn causes these materials to firstly pass through a condenser 14 and a biological filter 15 whereupon there is a return conduit 16 back to the network of conduits 10 across the floor of the chamber 1.

[0041] ~~As is shown in~~ Referring now to FIG. 2 in particular only, where there is a recirculation of liquid which is extracted at 20 in this case, and which is then caused to be passed through a submersible pump 21 ~~and so that~~ there is a distribution of such liquid into the top area 24 of the bin in this case 25, such that liquid this is distributed over the contents of the bin.

Page 6, lines 5 to the end of the page (standard paragraphs [0043] and [0044] of US Published Application 2007/0137105), please substitute the following paragraphs:

[0043] While not specifically shown in these schematic illustrations, there are also means with which to access the liquid in the sump 4 from outside the container, where this facilitates to effect cleansing from time to time of the sump area from time to time so as to also assist in removal of finer material that would settle over a period in this area.

[0044] ~~Throughout this specification the purpose has been to illustrate the invention and not to limit this.~~ The development of appropriate bacteria, which are anaerobic at least to a substantial extent and resistant to degradation in a higher than normal ammonia atmosphere, are also infecting the liquid as it seeps through, further treating materials carried by the liquid through the composting material and, as far as can be established so far, this has the result that the liquid itself is actually further cleansed.

[0045] Although the invention has been herein shown and described in what is conceived to be the most practical and preferred embodiment, it is recognized that departures can be made within the scope of the invention, which is not to be limited to the details described herein but is to be accorded the full scope of the appended claims so as to embrace any and all equivalent devices and apparatus. Those skilled in the art will appreciate that the conception upon which this disclosure is based may readily be utilized as a basis for designing other structures, methods, and systems for carrying out the several purposes of the present invention. It is important, therefore, to recognize that the claims should be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.